

REMARKS

Specification

1. The Examiner has requested that the graph on page 7 of the original specification be deleted and instead shown as a part of the drawings. The applicants have complied, and a new Fig. 16 with the graph information is being filed with this response in a separate drawing sheet. A Marked-Up Copy and a Clean Copy of the changes made to the Brief Summary of the Invention section of the original specification also accompany this response. In addition to deleting the graph information, the Marked-Up and Clean Copies of the changes made to the Brief Summary also include correction of typographical errors and the addition of a few words that enhance clarification of the disclosure.

Also, Clean and Marked-Up Copies of three additional specification pages, 9, 12, and 28, are included with this response to correct a typographical error noticed by the applicants in the Marked-up Copy of the Brief Summary of the Invention, and which was also discovered in the other three specification pages.

Claim Objections

2. Claim 13 is objected to due to the absence of a period at its end. The required punctuation has been added, as can be seen in the Listing of Claims provided herein. Therefore, the applicants herein respectfully request that the Examiner withdraw the objection noted in paragraph 2 of the Office Action.

Claim Rejections – 35 USC 112

3. This information in paragraph 3 of the Office Action is noted.
4. Claims 1-10 and 16-20 are rejected under 35 USC 112, second paragraph, as being indefinite. The applicants have provided antecedent where it was previously missing and canceled the claim

language that was determined to be indefinite. Therefore, the applicants herein respectfully request that the Examiner withdraw the objection noted in paragraph 4 of the Office Action.

Claim Rejections – 35 USC 103

5. This information in paragraph 3 of the Office Action is noted.
6. Claims 1, 2, 5, 16, and 20 are rejected under 35 USC 103(a) as being unpatentable over Aschauer 061 in view of Dahle and Aschauer 526. However, the applicants believe that there are many differences between the present invention and the Dahle and Aschauer inventions. One example is that the Dahle invention requires a marine transmission. The present invention does not, and instead its mechanisms for turning and reverse are provided by the discharge of fluids in combination with its rudder system, including a reverse flow gate. Also, the present invention does not cause a resistance or reduction of thrust by positioning the rudder in the discharge flow. Further, the present invention does not use precision bearings. Instead conventional marine bearings and shaft are used. In addition, propellers used in the present invention are of a standard design. Also, the present invention water inlet is of a proven shape that allows fluids to flow freely without obstruction, screens, or bars across it that clog the opening. Further, the present invention has debris-cutting members positioned in front of its first propeller, between its propellers, and in front of its strut. In addition, the present invention is tapered across its entire length to accelerate the constant volume of fluid flow there across, so as to generate a reaction of forward thrust that is greater than that provided its four augers alone, which are constant in pitch from front to rear. The present invention also requires no grease seals and the bearings are of a widely available proven design. In addition, the present invention can be disassembled and reconditioned easily with standard parts of marine design. In contrast, the Dahle unit cannot be installed as shown, the transom would not permit it. Further, the Dahle front seal cannot be replaced in the water as claimed, since the hole (45) is too inaccessible. Quite the converse, the present invention is of conventional design with regard to parts replacement and function.

Further, the Dahle design cannot be disassembled, since both of its ends are reduced in diameter, preventing shaft removal, as well as removal of the auger attached to the shaft. The Aschauer design is unlike the present invention since the present invention does not use reduction gears, nor are they necessary. Although steering in the Aschauer is unclear, it cannot be reversed without a marine transmission. The Aschauer unit is incorrectly designated as a hydraulic jet propulsion apparatus. In reality it is a reaction jet, and not hydraulic. The present invention is truly a reaction thruster and not a jet. A jet must use a fluid to expand past its normal state and discharge this fluid at a volume of greater magnification than the static state of water. The present invention unit does not accelerate the fluid to a state of velocity to create a pressure differential that can push the vessel forward. This is equated by a boy floating on a raft with a steel ball in his left hand. He must throw this steel ball to shore. When the steel ball leaves his hand, the weight of the ball will cause the raft to react in a direction opposite of the steel ball. The raft will accept this thrust reaction and move away from the shore. This is not a jet, but merely a reaction to the energy released by the boy's arm. The present invention is a thruster and the Aschauer unit is not a jet but merely a crude thrust device of impossible construction and design. The use of reduction gears for moving water or a fluid is better accomplished by reducing the pitch of the wheels or screws as they are called in marine jargon, and increasing the diameter to move the amount of fluid desired. Aircraft use reduction gears for the discharge of the fluids to move an aircraft forward when diameter is too large. In contrast, the present invention is simple, practical, and functional. Further, claims 1 and 16 have now each been amended to contain the debris cutting subject matter originally disclosed respectively in the original claims 9 and 19, which were considered by the Examiner to be allowable if presented in an independently written form that included all limitations of the base claim and intervening claims. Therefore, instead of claims 9 and 19 being rewritten, their limitations have been incorporated respectively into claims 1 and 16, with claims 2 and 5 depending from the newly amended claim 1, and also with claim 20 depending from the newly amended claim 16. Thus,

the applicants submit that the amendments to their claims made herein define an invention that is patentably distinct from the Dahle and Anschauer inventions, and they respectfully request that the Examiner withdraw his rejection of claims 1, 2, 5, 16, and 20 in paragraph 6 of the first Office Action.

7. Claims 6-8 and 18 are rejected under 35 USC 103(a) as being unpatentable over Aschauer 061, Dahle, and Aschauer 526, and further in view of Smith that discloses a reverse and steering assembly with Ackerman geometry. The applicants incorporate their arguments above herein relating to Dahle and Aschauer, and again submit that their amended claims now define an invention that is patentably distinct from the Dahle and Aschauer inventions. Therefore, they further argue that the addition of Smith to provide a reverse and steering assembly with Ackerman geometry is insufficient in combination with the Aschauer and Dahle inventions to teach, suggest, or reveal the present invention. Therefore, the applicants respectfully request that the Examiner withdraw his rejection of claims in paragraph 7 of the first Office Action.

Allowable Subject matter

8. Claims 11-15 are allowed.

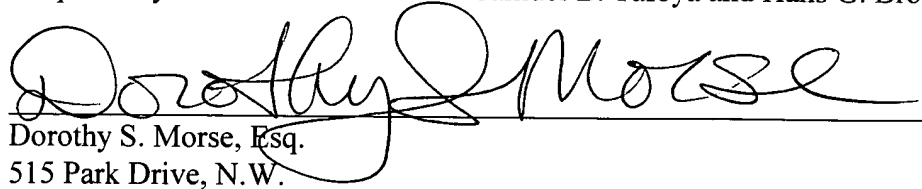
9. Claims 3, 4, 9, 10, 17, and 19 would be allowable if rewritten to overcome the 35 USC 112 objections. The applicants have written claims 3, 4, 9, 10, 17, and 19 and their other claims so that claims 3, 4, 9, 10, 17, and 19 are no longer based on rejected claims. Therefore, the applicants respectfully request that the Examiner consider their currently amended claims and allow them.

CONCLUSION

Since the applicants herein have now provided information to the Examiner about their invention in the format required by U.S. Patent & Trademark Office, and no new matter has been

added, and since they further submit that they have now defined an invention that is distinguishable from the prior art cited by the Examiner, the applicants respectfully request that their new and amended claims now be reviewed for patentability and allowed.

Respectfully submitted on behalf of Samuel B. Tafoya and Hans G. Broemel by:

A handwritten signature in black ink, reading "Dorothy S. Morse". The signature is written in a cursive style with a large, looping "D" and "M". It is positioned above a horizontal line.

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DRAWINGS

The graph on page 7 of the original specification has been removed and is being filed herein as Fig. 16. Since it is not being added to an existing drawing sheet, no sheet marked as an 'Annotated Sheet' has been filed, and only a page marked as a 'New Drawing Sheet' accompanies this Office Action response.